

**Patent claims**

1. A plug connector (24) for making electrical contact with a load (34), in particular in a bus system with a conductor run, comprising a contact maker (1), which is provided with bus-compatible electronics (4), and a fixing element (10) which is provided for arranging the contact maker (1) in a housing (16).
2. The plug connector (24) as claimed in claim 1, wherein the bus-compatible electronics (4) are arranged on a surface, in particular on a front face (S1), of the contact maker (1).
3. The plug connector (24) as claimed in claim 2, wherein contact elements (6) for making contact between the contact maker (1) or the electronics (4) located on the contact maker (1) and a flat conductor (14) are arranged on the front face (S1) of the contact maker (1).
4. The plug connector (24) as claimed in one of the preceding claims, wherein contact areas (8) or contact elements (6) for making contact between the contact maker (1) or the electronics (4) located on the contact maker (1) and a load (34) are arranged on the rear face (S2) of the contact maker (1).
5. The plug connector (24) as claimed in claim 4, wherein the front face (S1) and the rear face (S2) of the contact maker (1) are electrically connected to one another.
6. The plug connector (24) as claimed in one of the preceding claims, wherein the fixing element (10) has an opening (12) whose dimensions correspond substantially to those of the contact maker (1), so

that the contact maker (1) can be arranged in the opening (12) in the fixing element (10).

5 7. The plug connector (24) as claimed in one of the preceding claims, wherein the fixing element (10) has positioning aids (P1, P2) for arranging the flat conductor (14) on the fixing element (10) and for arranging the fixing element (10) in the housing (16).

10 8. The plug connector (24) as claimed in claim 7, wherein the positioning aid (P1) of the fixing element (10) for arranging the flat conductor (14) on the fixing element (10) is formed from one or more spikes (18) which are integrally formed on an outer edge of  
15 the fixing element (10).

9. The plug connector (24) as claimed in claim 7 or 8, wherein the positioning aid (P2) for arranging the fixing element (10) in the housing (16) is formed from  
20 projections (20, 22) of the outer contour of the fixing element (10).

10. The plug connector (24) as claimed in one of the preceding claims, wherein the housing (16) comprises an  
25 upper shell (16a) and a lower shell (16b).

11. The plug connector (24) as claimed in one of the preceding claims, wherein the size and shape of the housing (16) are selected such that the contact maker  
30 (1) and the fixing element (10) are accommodated in the interior of the housing (16).

12. The plug connector (24) as claimed in one of the preceding claims, wherein the housing (16) has at least  
35 two openings (30a, 30b), with a first opening (30a) for the flat conductor (14) to pass through being formed by cutouts (26) in a side wall of the upper shell (16a) and/or the lower shell (16b), and a second opening

(30b) for making contact between the contact maker (1) or the electronics (4) located on the contact maker (1) and a load being formed by an opening in the upper shell (16a) or in the lower shell (16b) of the housing (16).

13. The plug connector (24) as claimed in one of the preceding claims, wherein the upper shell (16a) and the lower shell (16b) are connected to one another by one or more webs (16c) such that they are joined to form the housing (16) by being folded together.

14. The plug connector (24) as claimed in claim 13, wherein the web or webs (16c) act as hinges.

15. The plug connector (24) as claimed in one of the preceding claims, wherein the upper shell (16a) and the lower shell (16b) of the housing (16) have latching elements (28) which allow the housing (16) to be assembled without additional fastening means.

16. The plug connector (24) as claimed in one of the preceding claims, wherein the housing (16) has a positioning aid (P3) which corresponds to the positioning aid (P2) of the fixing element (10) for arranging the fixing element (10) in the housing (16) and is made up of cutouts (26) in the side walls of the upper shell (16a) and/or the lower shell (16b) of the housing (16), so that the projections (22) of the fixing element (10) engage in the cutouts (26) in the housing (16) when the housing (16) is assembled.

**List of reference symbols**

1	Contact maker
4	Bus-compatible electronics
6	Contact element
8	Contact area
10	Fixing element
12	Opening
14	Flat conductor
16	Housing
16a	Upper shell
16b	Lower shell
16c	Web
18	Spike
20	First pair of projections
22	Second pair of projections
24	Plug connector
26	Cutout
28	Latching element
30a	First opening
30b	Second opening
32	Contact point
34	Load
36	Contact element
38	Retaining body
P1, P2, P3	Positioning aids
S1	Front face
S2	Rear face